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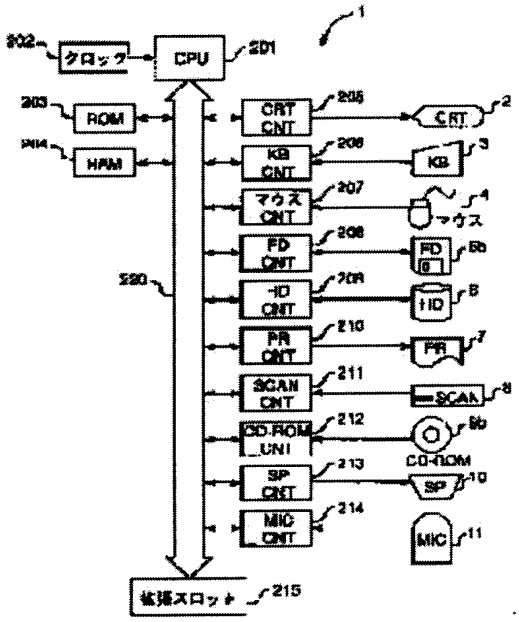
(54) PROCESSOR AND METHOD FOR INFORMATION PROCESSING AND RECORDING MEDIUM WHERE INFORMATION PROCESSING PROGRAM IS RECORDED

(57)Abstract:

PROBLEM TO BE SOLVED: To lighten the burden of key word adding operation by selecting a key word according to content information attached to an object and automatically adding it to the object or displaying a key word candidate.

SOLUTION: When image data are registered in an image data base, the image data as an object are selected with a mouse 4 or on a keyboard 3, etc., and the key word is determined or a key word candidate is displayed according to the content information attached to the selected image data. When a term included in the content information is a classification of the key word, key words registered below the layer of the classification are displayed on a display 2 as key word candidates for the image data. Thus, the key word is added or the key word candidate is extracted automatically according to the content information attached to the image data, so the burden of key word adding operation on the user is lightened and the key word can precisely be added in relation to the contents of the image data.



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CLAIMS

[Claim(s)]
[Claim 1]An information processor which relates an object with additional information which is search information on said object with contents information which is information which shows the contents of this object, and is saved and managed, comprising:
A memory measure.
An object selection means to choose said object.
A keyword determination means to determine a keyword based on contents information of an object selected by said object selection means.
A keyword addition means which adds a keyword determined by said keyword determination means as additional information to said object selected by said object selection means, and said memory measure is made to memorize.

[Claim 2]In the information processor according to claim 1, have further a key word storage means which memorizes a keyword, and when a term included in said contents information is registered into said key word storage means, said keyword determination means, An information processor choosing said term as a keyword.
[Claim 3]In the information processor according to claim 2, said keyword determination means, An information processor which chooses said term as a keyword and is further characterized by registering said term into said key word storage means when a term included in said contents information is not registered into said key word storage means.
[Claim 4]Have the following, and said key word storage means classifies and memorizes a keyword, Said displaying means displays a keyword which belongs to this classification when said term included in contents information of said object is in agreement with said classification as a keyword candidate, The information processor according to claim 2, wherein said keyword determination means chooses a keyword specified by said setting means from keyword candidates displayed on said displaying means.
A displaying means which displays a keyword candidate.
A setting means which specifies a specific keyword out of said keyword candidate.

[Claim 5]In the information processor according to claim 4, said key word storage means memorizes said keyword hierarchical, Said displaying means displays a keyword of this lower layer as a keyword candidate, when it has a keyword further in a lower layer of a keyword which was in agreement with a term included in contents information of said object, An information processor, wherein said keyword determination means chooses a keyword specified by said setting means from these keyword candidates displayed on said displaying means.
[Claim 6]An information processing method which relates an object with additional information which is search information on said object with contents information which is information which shows the contents of this object, and is saved and managed, comprising:
A step which chooses an object.
A step which chooses this keyword when a term included in contents information of a selected object is memorized by storage as a keyword.

A step which adds a selected keyword to a selected object as additional information, and it stores in a storage.

[Claim 7]The information processing method comprising according to claim 6:
A step which determines said term based on contents information of a selected object when a term included in contents information of a selected object is not memorized by storage as a keyword.
A step which adds said determined term to a selected object as additional information, and it stores in a storage.
A step stored in a storage by making a determined term into a keyword.

[Claim 8]The information processing method comprising according to claim 6:
A step which displays a keyword belonging to this classification as a keyword candidate when term of a step which chooses said keyword included in contents information of an object corresponds with a classification.
A step which chooses a keyword based on said object from displayed this keyword candidates.

[Claim 9]A recording medium which recorded a program for relating an object with additional information which is search information on said object, and saving and managing it with contents information which is information which shows the contents of this object, comprising:
A step as which said program chooses an object.
A step which chooses this keyword when a term included in contents information of a selected object is memorized by storage as a keyword.
A step which adds a selected keyword to a selected object as additional information, and it stores in a storage.

[Claim 10]The recording medium comprising according to claim 9:
A step as which said program determines said term based on contents information of a selected object when a term further included in contents information of a selected object is not memorized by storage as a keyword.
A step which adds said determined term to a selected object as additional information, and it stores in a storage.
A step stored in a storage by making a determined term into a keyword.

[Claim 11]The recording medium comprising according to claim 9:
A step which displays a keyword belonging to this classification as a keyword candidate when term of a step which chooses said keyword included in contents information of an object corresponds with a classification.
A step which chooses a keyword based on said object from displayed this keyword candidates.

[Translation done.]

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DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Field of the Invention]This invention relates to the information processor which adds a keyword to predetermined information.
[0002]
[Description of the Prior Art]In recent years, development of the information processing field is remarkable and especially the performance of a personal computer etc. is improving by leaps and bounds. By this, a picture and a document are incorporated and managed [accumulate and] with an input device also not only to a business field/particular application but to a general user, it searches if needed, and information processors printed with an output unit, such as an image database unit and an electronic filing device, are spreading.
[0003]Usually, when data is inputted for data retrieval facilitating in these information processors, the additional information for being used for search with data is inputted. By making the kind of this additional information increase, various search is attained and retrieval effectiveness improves. However, if the kind of additional information increases, at the time of data input, the increase in an input procedure and complicated-ization of operation are caused, and when there are many data registration numbers, it will become work troublesome for a user.
[0004]In attribution information, such as a creation date/modification date of data which is the information which becomes indispensable because of the data management which accompanies data, a file name, and a file format, it is common to add attribution information automatically to data. To image data, a tint is calculated from the color data of image data, and a method or a device added automatically is devised conventionally.
[0005]
[Problem(s) to be Solved by the Invention]However, there was no effective means about automatic addition of the keyword which is one of the additional information. . [whether in the former a user considers and does manual input of the keyword added to data, for example, and] Or only as for the method which a user chooses and adds out of a lot of keywords registered into the key word dictionary etc., there was nothing, and in such a method, the user had to take into consideration which is added out of a lot of keyword candidates, and the burden was placed on the user. Although there is the method of extracting as a keyword the word contained in the document in text data, and adding it, In this method, a word irrelevant [almost] is extracted as a keyword and there is a problem that it cannot respond in the problem of the accuracy of a keyword, the image data which does not contain a text, or voice data.
[0006]On the other hand, FlashPix (FlashPix) which is the new technology which aimed at popularization of image data edit was announced recently. Eastman Kodak Co., Microsoft Corp., Hewlett Packard, etc. develop this together, and it is the proposed image data file format. In this FlashPix format, in order to manage image data effectively, it is specified that it gives various information (the following "contents information" is called.) which shows those contents with image data into an image data file. For example, a FlashPix format, "File sauce (File source)" which describes in detail how image data was created to image data, It is specified that it has the information called attribute groups, such as "an intellectual property (Intellectual Property)"

including the information on ownership or copyright, and "content description (Content description)" which describes the contents of image data. It seems that the image data management according to this FlashPix format will spread from now on. However, under the present circumstances, even if it is the image data according to such a FlashPix format, in order to add the keyword used for search, it cannot but carry out by the conventional method, and there is the same problem as the above-mentioned.
[0007]There is a place which this invention is made that the above-mentioned problem should be solved, and is made into the purpose in providing the information processor which made it possible to add a keyword automatically based on the contents information which accompanies data irrespective of the kind of data of a text, a sound, a picture, etc.
[0008]
[Means for Solving the Problem]An information processor concerning this invention is provided with the following.
In an information processor which relates an object with additional information which is search information on said object with contents information which is information which shows the contents of this object, and is saved and managed, it is a memory measure.
An object selection means to choose said object.
A keyword determination means to determine a keyword based on contents information of an object selected by said object selection means.
A keyword addition means which adds a keyword determined by said keyword determination means as additional information to said object selected by said object selection means, and said memory measure is made to memorize.

[0009]In said information processor, it has further a key word storage means which stores a keyword, and said keyword determination means may choose said term as a keyword, when a term included in said contents information is registered into said key word storage means.
[0010]In said information processor, when a term included in said contents information is not registered into said key word storage means, said keyword determination means may choose said term as a keyword, and may register said term into said key word storage means further.
[0011]A displaying means which displays a keyword candidate further in said information processor, It has a setting means which specifies a specific keyword out of said keyword candidate, Said key word storage means classifies and memorizes a keyword, and said displaying means displays a keyword which belongs to this classification when said term included in contents information of said object is in agreement with said classification as a keyword candidate, Said keyword determination means may choose a keyword specified by said setting means from keyword candidates displayed on said displaying means.
[0012]In said information processor, said key word storage means memorizes said keyword hierarchical, When it has a keyword further in a lower layer of a keyword which was in agreement with a term included in contents information of said object, said displaying means, A keyword of this lower layer may be displayed as a keyword candidate, and said keyword determination means may choose a keyword specified by said setting means from these keyword candidates displayed on said displaying means.
[0013]An object is related with additional information which is search information on said object with contents information which is information which shows the contents of this object, and an information processing method saved and managed is provided with the following.
A step which chooses an object.
A step which chooses this keyword when a term included in contents information of a selected object is memorized by storage as a keyword.
A step which adds a selected keyword to a selected object as additional information, and it stores in a storage.

[0014]When a term included in contents information of a selected object in the above-mentioned information processing method is not memorized by storage as a keyword, A step which determines said term based on contents information of a selected object, a step which adds said

determined term to a selected object as additional information, and is memorized to a storage, and a step memorized to a storage by making a determined term into a keyword may be provided.
[0015]A step which chooses said keyword, When a term included in contents information of an object is in agreement with a classification, it may have a step which displays a keyword belonging to this classification as a keyword candidate, and a step which chooses a keyword based on said object from this displayed keyword candidates.
[0016]Said program is provided with the following in a recording medium which recorded a program for relating an object with additional information which is search information on said object, and saving and managing it with contents information which is information which shows the contents of this object.
A step which chooses an object.
A step which chooses this keyword when a term included in contents information of a selected object is memorized by storage as a keyword.
A step which adds a selected keyword to a selected object as additional information, and it stores in a storage.
When an information processor reads and executes a program recorded on this recording medium, a function for which additional information is automatically added based on contents information which accompanies an object is realized.
[0017]In said recording medium, said program, When a term included in contents information of a selected object is not memorized by storage as a keyword, It may have a step which determines said term based on contents information of a selected object, a step which adds said determined term to a selected object as additional information, and is stored in a storage, and a step stored in a storage by making a determined term into a keyword.
[0018]A step which chooses said keyword in said recording medium, When a term included in contents information of an object is in agreement with a classification, it may have a step which displays a keyword belonging to this classification as a keyword candidate, and a step which chooses a keyword based on said object from this displayed keyword candidates.
[0019]Here, an object means a folder etc. which summarized these for electronic intelligence which serves as a subject who should be saved and managed by the above-mentioned information processor, for example, text data, voice data, or image data. Attribution information is secondary information added to an object as these subjects, for example, search keys, including a keyword, a color, shape, etc., a data creation person, the date and time of creation, size, a comment, an icon, etc.
[0020]
[Embodiment of the Invention]Hereafter, the embodiment of the information processor applied to this invention using an attached drawing is described.
[0021]The information processor of this embodiment manages the additional information which is the image data which is one of the objects, and one of the attribution information to the image data. Namely, an information processor constitutes the database management system (an "image database" is called hereafter.) of image data, adds a search key to image data as additional information, and can search image data now using this search key. Although there are a keyword, a color, a figure, etc. showing the feature of a picture as a search key used for an image database, a keyword is used in this embodiment. This information processor deals with the image data accompanied by the contents information which is information which shows the contents, such as the name of the title about the image data, the purpose, a place, and material being, and performs automatically setting out of a keyword, or a keyword candidate's display based on the contents information. . As contents information, are prescribed by the above-mentioned FlashPix format here, for example. . "The content description (Content description)" which is an attribute group who describes the contents of image data is described. "The explanatory text (caption text)" which described the theme/the purpose of image data, The information on "the thing (things in the image) in image data" which described the name of the material being described in image data, or "the place (places in the image) in image data" which described the place described in image data may be used. The composition and operation of this information

processor are explained below.
[0022]The outline lineblock diagram of the information processor (a "system" is called hereafter.) of this embodiment is shown in drawing 1. As shown in drawing 1, a system is provided with a central processing unit ("CPU" is called hereafter.), and the control device 1 which controls the whole system is constituted as a center. Pentium made from Intel, etc. are used for CPU. The display 2 which performs the display of a picture or a character, the display for operation, etc. in this control device 1, The keyboard 3 and the mouse 4 for performing various inputs, instructing operation, etc., The floppy disk drive unit 5a and the hard disk drive 6 which are data storage media, The printer 7 which prints a character, image data, etc., the scanner 8 for incorporating image data, the CD-ROM device 9b for reading the data stored in CD-ROM 9a, the loudspeaker 10 for voice response, and the microphone 11 for voice input are connected.
[0023]The block diagram of this system is shown in drawing 2. RAM204 which stores temporarily the program executed for control of ROM203 and CPU201 in which the program which controls this system is stored, and data is connected to CPU201 via the data bus 220. In the circuit connected to CPU201 via the data bus 220. The display control circuit 205 which controls the display 2 for the display of a picture or a character, The keyboard control circuit 206 which carries out transfer control of the input from the keyboard 3, The mouse control circuit 207 which carries out transfer control of the input from the mouse 4, and the floppy disk drive unit control circuit 208 which controls the floppy disk drive unit 5b, The hard disk drive control circuit 209 which controls the hard disk drive 6, The printer control circuit 210 which controls the output to the printer 7, and the scanner control circuit 211 which controls the scanner 8, There are the CD-ROM device control circuit 212 which controls the CD-ROM device 9b, the loudspeaker control circuit 213 which controls the loudspeaker 10, and the microphone control circuit 214 which controls the microphone 11. The expansion slot 215 for the clock 202 for generating a reference clock required in order to operate a system being connected, and connecting various add-in boards is connected to CPU201 via the data bus 220. A SCSII board may be connected to the expansion slot 215, and the floppy disk drive unit 5b, the hard disk drive 6, the scanner 8, or the CD-ROM device 9b may be connected via this SCSII board.
[0024]In the above-mentioned system, although the floppy disk 5a and the hard disk drive 6 are used as an image data storage medium, other information storage media, such as a magneto-optical disc (MO), may be used. Although the scanner 8 is used as an image data input device, they may be other data input units, such as a still video camera and a digital camera. Although the printer 7 is used as an output unit, they may be other output units, such as a digital copier.
[0025]In this system, the program which realizes the managerial system of image data is stored in ROM203. However, a part or all of this program is stored in the floppy disk 5a or the information storage medium of hard disk drive 6 grade, if needed, from an information storage medium, a program and data may be read to RAM204 and this may be performed. Although this system is inputted into the hard disk drive 6 from an external input device and he is trying to manage the stored image data, managing directly the image data stored in CD-ROM 9b is also considered. In this case, the index data which is data which specifies the image data stored in CD-ROM 9b, and the search key added to this index data are stored in the hard disk drive 6 (the set of this index data and search key is called a "record".). What is necessary is to extract a record as search results first based on the set-up search key, and just to read desired image data from CD-ROM 9b after an appropriate time based on the index data of the extracted record at the time of search of image data.
[0026]An example of the setting screen displayed on the display 2 with execution of a program in this system is shown in drawing 3. In this figure, Screen 21 is an initial menu screen displayed at the time of a system start. The setting screen according to processing is displayed by choosing each selections 23-27 of an initial menu screen. A user performs the input of a preset value required for setting out of operational mode, registration of data, or registration of a keyword, etc. on these setting screens.
[0027]This system has a key word dictionary used at the time of an image database including image data, and its contents information and additional information and search in order to

manage image data as mentioned above. These image databases and key word dictionaries are memorized by the information storage medium of hard disk drive 6 grade. An example of the composition of the image database and key word dictionary which are memorized in the hard disk drive 6 of this system is shown in drawing 4 and drawing 5. The "index" whose image databases 31 shown in drawing 4 are various index data, i.e., a registration number, The "data path" which shows the place on the "data name" showing the contents of image data and the information storage medium with which image data is memorized, the "file name" of image data and the index data of a "keyword" etc. used at the time of search, other information, etc. are included.
[0028]The key word dictionary 33 shown in drawing 5 consists of the classification table 35 which stores a classification item, and the key word table 37 which stores a keyword. The classification table 35 consists of an "index" which is a registration number of a classification item, and a "classification name" which is the names of a classification item. Here, a classification item is an item for classifying a keyword. For example, as shown in drawing 5, there are "area", "season", etc. in a classification item, and the keyword relevant to areas, such as the name of a country and a name of a prefecture, is registered under the "area" of a classification item. The "index" whose key word table 37 is a registration number of a keyword, It consists of the "classification number" which shows to which classification item a keyword belongs, a "parent index" which shows the index of the keyword of the higher rank when a keyword makes a hierarchy, and a "keyword name" which is concrete keywords. "000" in a parent index shows that the keyword belongs to the top hierarchy. When it sees about the keyword (indexes are 001-007) from which the classification number of the key word table 37 shown by drawing 5 is set to "01" (area), these keywords show a hierarchy as shows drawing 6 from the relation of a parent index.
[0029]In this system constituted as mentioned above, when image data is registered into the image database 31, The image data which is an object is chosen by the mouse 4 and keyboard 3 grade, and the determination of a keyword or a keyword candidate's display is performed based on the contents information which accompanies the selected image data. That is, when the term included in the contents information of the selected image data is registered into the key word dictionary 33 which has memorized the keyword, the term is determined as a keyword, is added to image data, and is registered into the image database 31 with image data.
[0030]Since the key word dictionary 33 classified the keyword and has memorized it hierarchical, when the lower layer of the keyword has a keyword, the lower layer keyword is further displayed on the display 2 which is a displaying means as a keyword candidate. When the term included in contents information is the classification which is a keyword, the keyword registered into the lower layer of the classification is displayed on the display 2 as a keyword candidate of image data. Thus, out of the keyword candidate displayed on the display 2. The keyword specified by the user via a means to specify the arbitrary coordinates positions on the display 2 of a keyboard, a mouse, etc. is chosen as a keyword which should be registered, is added to image data, and is registered into the image database 31 with image data. In order that this system may perform addition of a keyword, or a keyword candidate's extraction automatically based on the contents information which accompanies image data as mentioned above, A user's burden can be eased in the addition work of a keyword, and the keyword relevant to the contents of image data can be added with sufficient accuracy.
[0031]Below, the control management of this system is explained. Drawing 7 is a flow chart of the main routine of the control management which CPU201 performs based on the program stored in ROM203. If a program is started after the power supply of a system is switched on, CPU201 will first perform initialization processings, such as a display of initialization of a variable required of each processing etc., and the initial menu screen 21 (drawing 3) to the display 2 top (S1). Next, it is judged whether selection of processing was performed on the initial menu screen 21 (S2). Here, when "data registration" 23 are chosen, an image is captured from the picture input device of scanner 8 grade as data, and data registration processing which adds predetermined information and is registered to a database is performed (S3). "Keyword registration" When 24 is chosen, keyword registration processing which performs processing which registers to a database the keyword added to image data is performed (S4). "Data

retrieval" When 25 is chosen, retrieval processing which searches desired image data from a database is performed (S5). "Data output" When 26 is chosen, data output processing which prints image data with a display or the printer 7 on the display 2 is performed (S6). When "other menu" 27 are chosen, predetermined processings other than the above-mentioned processing are performed (S7). When nothing is chosen on the initial menu screen 21, it progresses to Step S8. Others are processed in Step S8.

[0032]About retrieval processing (S5), data output processing (S6), other menu processings (S7), and other processings (S8), it is fundamentally [as processing with the conventional information processor] the same, and since it is not related to this invention, explanation here is omitted. Below, the above-mentioned data registration processing (S3) and keyword registration processing (S4) are explained in detail.

[0033]Drawing 8 shows the flow chart of the data registration processing (Step S3 of drawing 6) in a main routine. In data registration processing, it is judged whether CPU201 performs data registration by the operational mode in automatic key attachment mode first (S301). A user makes this judgment based on the value inputted on the data registration screen 29. With automatic key attachment mode, here so that a user can choose a keyword from predetermined candidates, It is the operational mode which chooses addition or a keyword candidate automatically and displays a keyword based on the contents information which accompanies image data out of the keyword registered into the key word dictionary a priori. As a result of judging (S301), when performing data registration in automatic key attachment mode, The automatic key attachment mode flag which is a flag for judging whether a system is in automatic key attachment mode is turned ON (S302), and when not performing data registration in automatic key attachment mode, an automatic key attachment mode flag is turned OFF (S303).

[0034]Next, the image data which it is going to process from now on judges a new input and the data which has already existed in the database (S304). A user makes this judgment based on the input performed via the mouse 4 or the keyboard 3 on the data registration screen 29. As a result of judging (S304), when image data is a new input, incorporation processing of the image data which incorporates new image data is performed (S305). The details of incorporation processing (S305) of this image data are mentioned later. When image data is the existing data, desired data is chosen out of the existing image data (S306). Here, incorporation or selection of image data is performed by the user via the mouse 4 or keyboard 3 grade on the data registration screen 29.

[0035]Then, based on an automatic key attachment mode flag, it is judged whether operational mode is automatic key attachment mode (S307). When it is not in automatic key attachment mode, it progresses to Step S317 and automatic addition of a keyword is not performed. In the case of automatic key attachment mode, it is judged whether the term included in the contents information which accompanies image data is registered into the key word dictionary (S308). Here, it may judge whether contents information is thoroughly in agreement with the term of a key word dictionary, when contents information is a text/compound, only a word may be extracted, and it may be judged whether the word is in agreement with the term of a key word dictionary. As a result of this judgment (S308), when the term included in contents information is not registered into a key word dictionary, it progresses to Step S317. On the other hand, when the term included in contents information is registered into the key word dictionary, it is judged whether the keyword is a classification item (S309).

[0036]When the term in Step S309 included in contents information as a result of judgment is a classification item, it displays on a screen by making into a keyword candidate the keyword located in the top hierarchy among the keywords applicable to the classification item registered into the key word dictionary (S310), and progresses to Step S314. For example, when the term of the "area" which is one of the classification items is included in contents information, a classification item displays on a screen by making into a keyword candidate "Asia" and "North America" which are the top hierarchy's keywords among the keywords used as the "area."

[0037]When the term included in contents information is not a classification item, it is set as additional information by making into a keyword the term included in this contents information (S311). Next, it is judged whether the lower layer of the keyword which is in agreement with the

term included in contents information has a keyword further (S312). When a lower layer has a keyword, only a lower layer keyword group is displayed as a keyword candidate (S313), and it progresses to Step S314. When there is no keyword in a lower layer, it progresses to Step S317.
[0038]In Step 314, it is judged whether a keyword is chosen and added out of the keyword candidate currently displayed on the screen. When not performing this selection addition, it progresses to Step S317. When performing selection addition, the keyword specified by the user in the keyboard 3 or the mouse 4 grade is chosen from the keyword candidates displayed at Step S310 or Step S313 (S315), The selected keyword is set as additional information (S316), and it progresses to Step S317.
[0039]In Step 317, it is judged whether additional information is inputted manually. When not inputting additional information manually, it progresses to Step S319. When inputting additional information manually, an additional information input process is performed (S318), and it progresses to Step S319. The details of an additional information input process (S318) are mentioned later. In Step S319, image data is registered into a database with additional information.
[0040]The information processor of this embodiment chooses a keyword based on the contents information of image data as mentioned above, and this keyword is set as additional information. In the above-mentioned explanation, in Step S308, when the term of contents information was not registered into a key word dictionary, did not perform automatic addition of the keyword, but. Even if it does not register with a key word dictionary, the term of contents information is automatically registered into a key word dictionary, and it may be made to set it as additional information.
[0041]Drawing 9 is a flow chart of incorporation processing (Step S305 of drawing 8) of the above-mentioned image data. In incorporation processing of image data, image data is first incorporated from the information storage medium which stores the image data of the picture input device of scanner 8 grade, or hard disk drive 6 grade (S3051). Next, the image content information relevant to image data is inputted from an input device (S3052). A user may specify contents information with this device instead of inputting image content information from an input device. Although image content information was acquired from the input device, a classification item may be acquired instead of image content information. Then, the keeping destination of image data is set up (S3053), the data name of image data is inputted (S3054), and processing is ended. Thus, incorporation of image data is performed.
[0042]Drawing 10 is a flow chart of the above-mentioned additional information input process (Step S318 of drawing 8). In an additional information input process, the menu for an additional information input is displayed on the screen, and CPU201 judges which processing was chosen (S3181). That is, it is judged any should be chosen between the processing which adds a keyword to additional information manually by a user, or the processing which adds information other than a keyword to additional information, or whether neither is chosen. When neither is chosen, it progresses to Step S3184. When the processing which adds a keyword is chosen, keyword attached processing is performed (S3182). The details of keyword attached processing are mentioned later. When the processing which adds other information is chosen, other information attached processing is performed (S3183). Since it is equivalent to the processing from the former, or keyword attached processing of Step S3182 about other information attached processing, explanation here is omitted. Then, it judges whether additional information processing is ended based on the input on the screen by a user (S3184), and the above-mentioned operation is repeated until a user terminates this processing.
[0043]Drawing 11 is a flow chart of the above-mentioned keyword attached processing (Step S3182 of drawing 10). In keyword attached processing, first, as shown in drawing 12, the whole tree structure of a key word dictionary is displayed (S31821). A user chooses a keyword to incorporate out of the tree displayed on the screen. There are a way a user clicks the keyword with the mouse 4 as the method of selection, for example as shown in drawing 13, the method of moving cursor to the position of the keyword with the keyboard 3, and specifying a reversing display and by carrying out highlighting, etc. Next, a keyword with the selected user is incorporated (S31822), and this keyword is set as additional information (S31823). Then, it judges

whether keyword attached processing is ended based on the input on the screen by a user (S31824), and the above-mentioned operation is repeated until a user terminates this processing.

[0044]Drawing 14 is a flow chart of the keyword registration processing (step S4 of drawing 7) in a main routine. In keyword registration processing, a system displays the whole tree of the key word dictionary 33 first (S41). Next, a position (hierarchy) to register into the keyword specified by the user in the tree of the key word dictionary 33 is inputted (S42). There are the method of a user clicking the keyword of the upper layer of a registration position with the mouse 4, or moving cursor to a registration position as a specification method of a registration position, for example, and specifying a reversing display and by carrying out highlighting, etc. Next, the character string inputted by the user via the keyboard 3 grade is inputted as a keyword (S43). Then, the inputted keyword is registered into the specified position of the key word dictionary 33 (S44). The display of the keyword tree on the display 2 currently displayed is updated after registration (S45). Then, it judges whether keyword registration processing is ended based on the input from the screen by a user (S46), and the above-mentioned operation (S42-S46) is repeated until a user terminates this processing.
[0045]
[Effect of the Invention]According to the information processor of this invention, based on the contents information which accompanies an object, a keyword is chosen, and it is automatically added to an object, or a keyword candidate is displayed. For this reason, the burden of keyword addition work is eased substantially, and the keyword relevant to the contents of the object is added with sufficient accuracy.

[Translation done.]

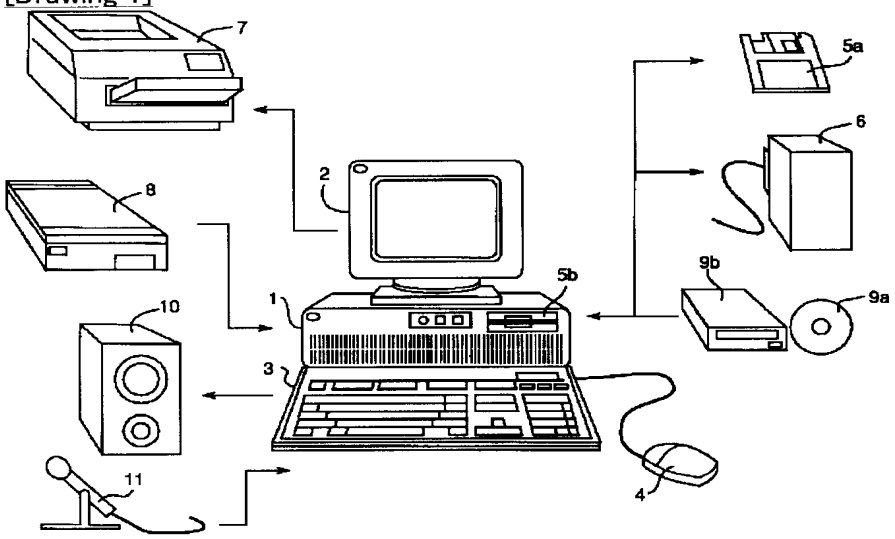
* NOTICES *

JPO and INPIT are not responsible for any
damages caused by the use of this translation.

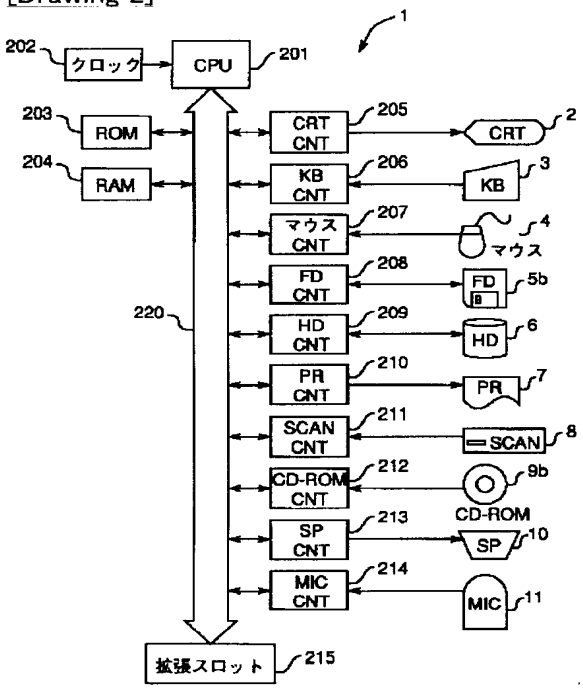
1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

DRAWINGS

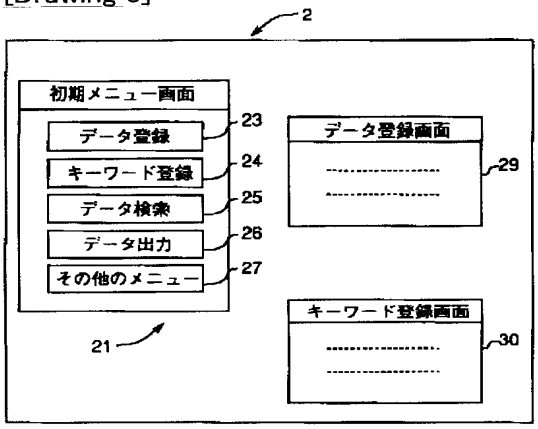
[Drawing 1]



[Drawing 2]



[Drawing 3]

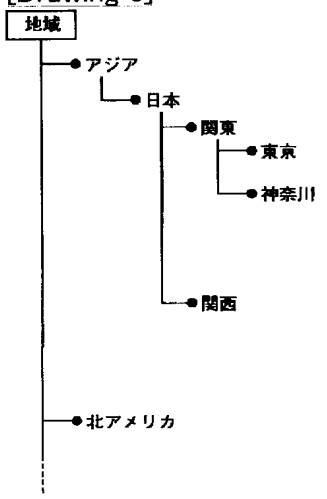


[Drawing 4]

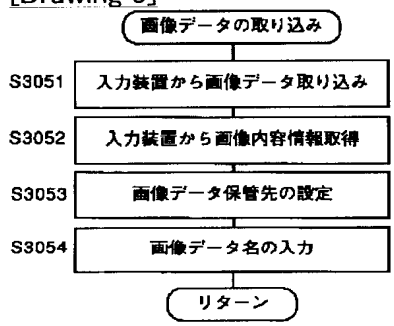
31 画像データベース

インデックス	データ名	データパス	ファイル名	キーワード	他の情報	…
00001	富士山	c:¥folder	img1.fpx	002	:	:
00002	東京タワー	c:¥folder	img2.jpg	004	:	:
00003	レインボーブリッジ	d:	img3.bmp	004	:	:
00004	:	:	:	:	:	:
:	:	:	:	:	:	:
:	:	:	:	:	:	:

[Drawing 6]

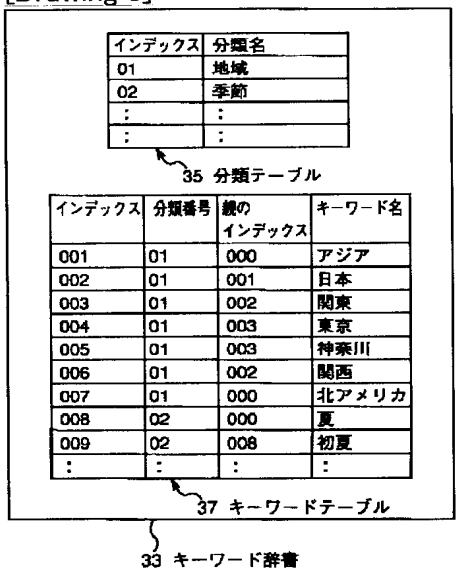


[Drawing 9]



[Drawing 13]

[Drawing 5]



インデックス	分類名
01	地域
02	季節
:	:
:	:

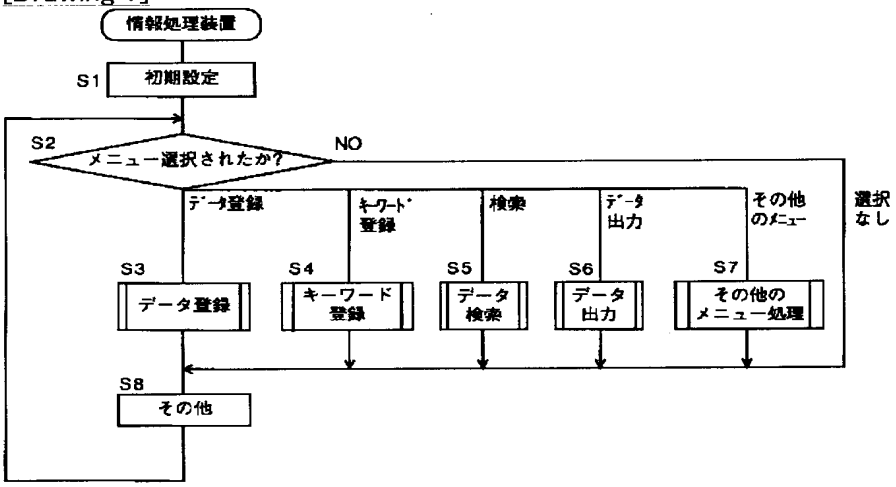
35 分類テーブル

インデックス	分類番号	親のインデックス	キーワード名
001	01	000	アジア
002	01	001	日本
003	01	002	関東
004	01	003	東京
005	01	003	神奈川
006	01	002	関西
007	01	000	北アメリカ
008	02	000	夏
009	02	008	初夏
:	:	:	:

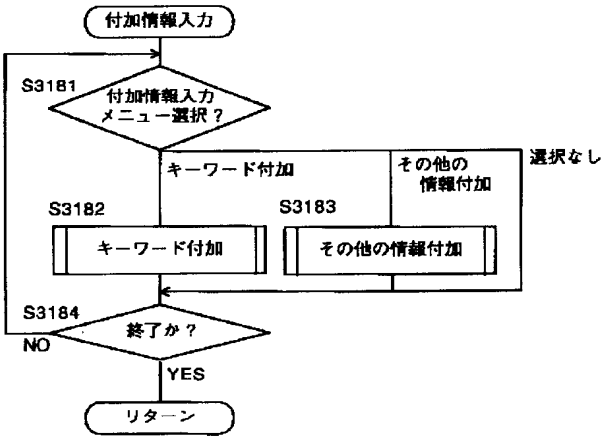
37 キーワードテーブル

33 キーワード辞書

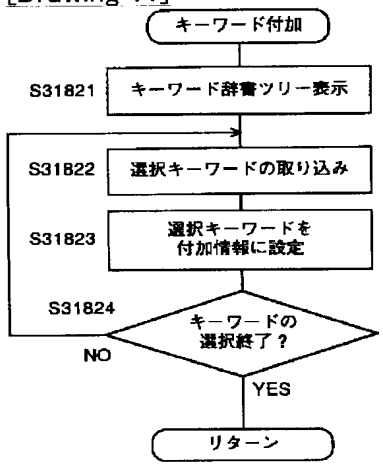
[Drawing 7]



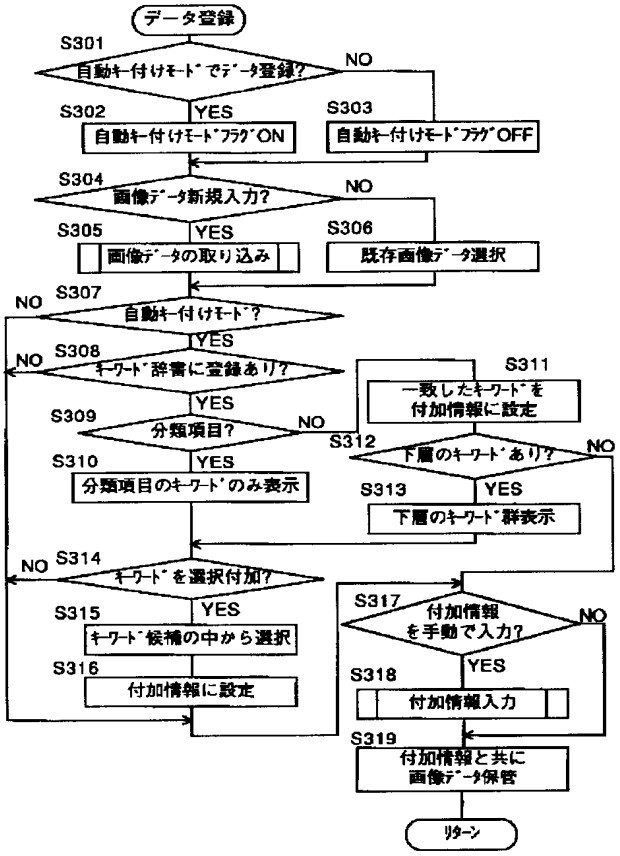
[Drawing 10]



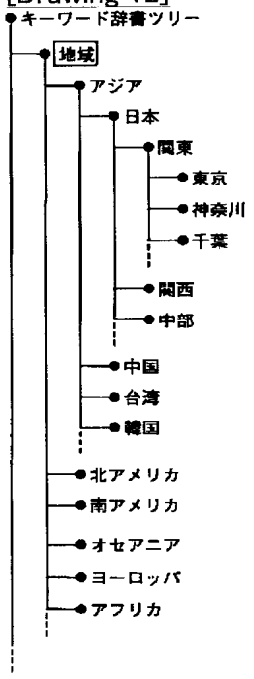
[Drawing 11]



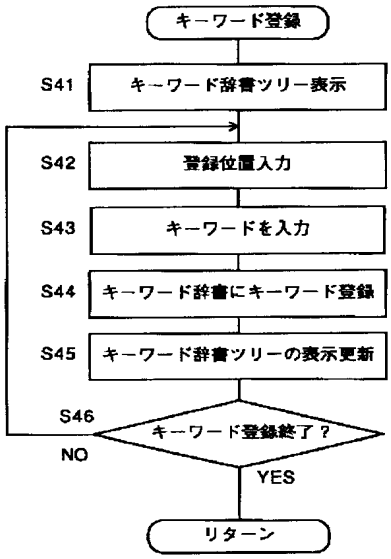
[Drawing 8]



[Drawing 12]



[Drawing 14]



[Translation done.]